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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/596,787

04/03/2007

Steven Ian Pegg

4015-5827

1462

24112 7590 10/05/2009  
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EXAMINER

SEDIGHIAN, REZA

ART UNIT

PAPER NUMBER

2613

MAIL DATE

DELIVERY MODE

10/05/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/596,787	<b>Applicant(s)</b> PEGG ET AL.	
	<b>Examiner</b> M. R. Sedighian	<b>Art Unit</b> 2613	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24-26, 28 and 29 is/are allowed.
- 6) ☒ Claim(s) 13, 16, 18-20, 23 and 27 is/are rejected.
- 7) ☒ Claim(s) 14, 15, 17, 21 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/23/06</u> .   | 6) <input type="checkbox"/> Other: _____                          |

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1. This communication is responsive to applicant's 6/23/06 preliminary amendments. The amendments have been entered. Claims 13-29 are now pending.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 16, 18, 19, 20, and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 16, it is not clear about "... the one or more frequency components selectively sensed by the light sensor comprises a filling channel." What does it mean by a filling channel??

As to claim 18, it is not clear about "... an optical switch; and a receiver selectively connected to the second optical transmission fiber or to the optical circulator." Figure 3 shows optical switches 16 and 16' that are connected, respectively, to optical circulators 9 and 9'.

As to claim 19, it recites the limitation "the receiver" in line 1. There is insufficient antecedent basis for this limitation in the claim.

As to claim 20, it recites the limitation "the optical switch" in line 1. There is insufficient antecedent basis for this limitation in the claim.

As to claim 27, it is not clear about "... the first switching fabric is disposed between the optical information signal source and the de-multiplexer in the first optical component, and the second switching fabric is disposed between the optical information signal source and the multiplexer in the second optical component." Figure 3 shows the network node or amplifier

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node can have de-multiplexers, multiplexers, and switches. Figure 3 shows a first switch 16 that is connected to de-multiplexer 4 and to the circulator 9, and a second switch 16' that is connected to circulator 9'. Switch 16' is not connected to multiplexer 7'.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fatehi et al. (US Patent No: 6,317,255 B1) in view of Lemus et al. (US Patent No: 6,111,676).

Regarding claim 13, Fatehi teaches an optical communication network component (202, 201, 220, fig. 2), comprising: an optical information signal source to provide an optical information signal (col. 2, line 62, col. 3, lines 41-45); an output port to output the optical information signal (col. 3, lines 62-65) over a first optical transmission fiber (202, fig. 2); a light sensor (230, fig. 2); an optical circulator (220, fig. 2) to transmit the optical information signal from the optical information signal source to the output port (col. 4, lines 35-40 and 222, 202, fig. 2), and to transmit reflected light from the output port to the light sensor (col. 4, lines 45-57); and a first transmitter laser (210, fig. 2) configured to associate a time marker (col. 3, lines 53-65, the pump light output signal) with the optical information signal provided by the optical information signal source; and an evaluating circuit (231, fig. 2) coupled to the light sensor (230, fig. 2) to detect the power of the reflected light signal (col. 4, lines 52-56). Fatehi differs from the claimed invention in that Fatehi does not disclose the evaluating circuit (the power monitor

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231) detects a time delay between the time marker and a corresponding time marker associated with the received light arriving at the light sensor. Lemus teaches an apparatus and method for detecting reflections in WDM systems (col. 1, lines 1-12), wherein an evaluating circuit (17, fig. 1) can detect a time delay between a time marker signal (col. 3, lines 40-54, 60-67, col. 4, lines 4-67 and  $S_F$ , fig. 1) and a corresponding time marker signal associated with a received light (col. 5, lines 1-22 and  $S_R$ , fig. 1) arriving at a light sensor (5, 5', fig. 1). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate a signal monitoring apparatus and unit (or an evaluating unit), such as the one disclosed by Lemus, for the signal power monitoring unit of Fatehi, to further detect the location of any reflection, or a fiber break, or a bad connection in the transmission system (Lemus, col. 5, lines 19-22).

Regarding claim 23, Fatehi further teaches a tap (240, fig. 2) disposed between the optical circulator (220, fig. 2) and the output port (202, fig. 2) to monitor the optical information signal provided by the optical information signal source (col. 5, lines 16-20).

6. Claims 14-15, 17, and 21-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 24-26 and 28-29 are allowed over prior art of record.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (571) 272-3034.

The examiner can normally be reached on 9 to 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. R. Sedighian/  
Primary Examiner, Art Unit 2613